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EXAMINER
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ZIMMERMAN, BRIAN A

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* TOSHIHIDE HAMAGUCHI  
and HIROKAZU GENNO

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Appeal 2009-014510  
Application 09/582,874  
Technology Center 2600

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Before KENNETH W. HAIRSTON, MARC S. HOFF  
and CARL W. WHITEHEAD, JR., *Administrative Patent Judges*.  
HAIRSTON, *Administrative Patent Judge*.

DECISION ON APPEAL<sup>1</sup>

This is an appeal under 35 U.S.C. §§ 6(b) and 134 from the final rejection of claims 1 to 6 and 9 to 17. We will reverse.

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<sup>1</sup> The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the “MAIL DATE” (paper delivery mode) or the “NOTIFICATION DATE” (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

The disclosed invention relates to a drive signal fed to a vibrator of a notifying device used in a wireless communication system. The drive signal fed to the vibrator has a frequency that varies in a range including a resonance frequency of the vibrator in the form of sawtooth waves (Figs. 1-10; Spec. 9, 14, 22, and 23; Abstract).

Claim 1 is representative of the claims on appeal, and it reads as follows:

1. A notifying device comprising a vibrator to be resonated by a drive signal fed thereto, and a signal preparing circuit for feeding the drive signal to the vibrator at the time of a notifying operation, wherein a frequency of the drive signal varies in a range including a resonance frequency of the vibrator in the form of sawtooth waves, the sawtooth waves comprising a portion inclined with respect to a time base and a portion perpendicular to the time base.

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Kagan	US 3,623,064	Nov. 23, 1971
Hegeler	US 4,727,331	Feb. 23, 1988
Mittel	US 5,828,295	Oct. 27, 1998
Saiki	US 6,208,237 B1	Mar. 27, 2001

The Examiner rejected claims 1 to 3 and 10 to 16 under 35 U.S.C. § 103(a) based upon the teachings of Mittel and Hegeler.

The Examiner rejected claims 4 to 6 under 35 U.S.C. § 103(a) based upon the teachings of Mittel, Hegeler, and Kagan.

The Examiner rejected claims 9 and 17 under 35 U.S.C. § 103(a) based upon the teachings of Mittel, Hegeler, and Saiki.

According to the Examiner (Final Rej. 3, 4), Mittel describes a notifying device 100 with a notifying device 102 that generates a tactile alert during a notification operation. The Examiner acknowledges (Final Rej. 4) that the notifying device in Mittel is not driven by sawtooth waves.

According to the Examiner (Final Rej. 4), Hegeler describes an alerting system with a vibrator frequency “in the form of sawtooth waves (col. 2, line 46 to col. 3, line 11).” The Examiner contends (Final Rej. 4) that it would have been obvious to one of ordinary skill in the art to use the sawtooth wave teachings of Hegeler in lieu of the square wave pulses in Mittel because Hegeler “converts the square wave pulses to sawtooth-shaped waves in order to enhance the dynamic range of variation obtainable (col. 4 lines 1-15).”

Appellants argue *inter alia* (Br. 11) that the pulse frequency in Hegeler is not affected by the wave-shaping circuit 15, and, therefore, the frequency of the sawtooth-shaped pulses is constant.

Based upon the foregoing, we must determine whether the Examiner erred by finding that the square wave drive signal in Mittel when modified by the sawtooth wave teachings of Hegeler would produce a sawtooth wave drive signal with a frequency that varies in a range including a resonance frequency of the vibrator.

We agree with the Examiner that it would have been obvious to the skilled artisan to covert the square wave pulses in Mittel to sawtooth-shaped waves based upon the teachings of Hegeler. On the other hand, we agree

with Appellants' argument that the teachings of Mittel as modified by the teachings of Hegeler would lack a sawtooth wave drive signal with a frequency that "varies" because Hegeler is completely silent as to varying the frequency of the converted square wave pulses. Hegeler only states that [t]he pulse repetition lengths, and the pulse frequency, are not affected by the wave-shaping circuit 15" (col. 4, ll. 13 to 15). Thus, the Examiner erred in finding that the square wave drive signal in Mittel when modified by the sawtooth wave teachings of Hegeler would produce a sawtooth wave drive signal with a frequency that varies in a range including a resonance frequency of the vibrator.

In summary, the obviousness rejection of claims 1 to 3 and 10 to 16 is reversed because we agree with Appellants' argument that the Examiner's articulated reasoning in the rejection does not support a legal conclusion of obviousness. *KSR Int'l v. Teleflex, Inc.*, 550 U.S. 398, 418 (2007).

The obviousness rejections of claims 4 to 6, 9, and 17 are reversed because the vibrator drive frequency teachings of Kagan (col. 1, ll. 21 to 30), and the vibrator structure teachings of Saiki (col. 1, l. 60 to col. 2, l. 15; col. 6, ll. 41 to 64) fail to cure the noted shortcoming in the teachings of Mittel and Hegeler.

The decision of the Examiner is reversed.

REVERSED

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